

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15, 16, 19-23, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,759,000 to Cook in view of US 4,674,251 to Wolff and US 6,672,460 to Baltzer. Cook discloses a frame over which woven wire mesh is to be stretched and secured to form a sieving screen which can be used to screen solids from drilling mud recovered from down-hole when drilling for oil or gas comprising a rectilinear moulded plastics frame having edge regions (20) by which it is secured in place in a shaker and defining a plurality of rectilinear windows (figure 1) formed by an orthogonal array of intersecting ribs (14, 16) also of moulded plastics material at least some of which are internally reinforced by a structure comprising two spaced apart layers of orthogonal intersecting spaced apart wires (54, 56 c11 lines 40+), running parallel to the length and breadth of the rectilinear shape of the frame within the ribs to increase their rigidity (figure 1). Cook further discloses a flange 20 that is formed around the perimeter and to which the wires are all attached as shown in figure 3 and c11 lines 40+. Cook does not show the edge regions of the frame are reinforced internally by metal box-section members joined at their four corners and defining a perimeter reinforcement and the ends of the wires are secured to the box-section

Art Unit: 3653

members. Wolff show a screen framed in which a combination of rectangular cross-section plastic premouldings (9) and rectangular metal reinforcing rods (12) are assembled and then encased in a plastic material. The combination of the premouldings and the rods prevents shrinkage, and provides an adequately rigid screen that takes advantage of the wear properties of plastic materials (c2 lines 4+ and c2 lines 33+). Wolff does not explicitly disclose metal box-sections. Baltzer discloses, and it is well known in the art of screen frames, using metal box sections (c3 lines 41+) to form the perimeter of the frame. Such constructions are known to provide more rigid lighter weight frames than solid cross-section arrangements.

3. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Cook to include a metal box-section frame as Wolff teaches that rigid embedded peripheral frames prevent shrinkage and provide an adequately rigid screen that takes advantage of the wear properties of plastic materials and metal box section frames are well-known and widely used to provide more rigid lighter weight frames than solid cross-section arrangements. The realization of these advantages would have been obvious to one of ordinary skill in the art at the time of the applicant's invention.

Re claim 16 the teachings of both Cook and Wolff recite encapsulating the entire support frame structure in a single plastic material.

Re claims 19-21 see Cook c1 lines 53-61, c2 lines 52-55, and c14 lines 32-36.

Re claims 22 and 23 see Baltzer showing square cross sections.

Re claim 27 see Cook c4 lines 56+.

Re claim 28 see Cook c12 lines 21+.

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook, Wolff and Baltzer as applied to claims 15, 16, 19-23, 25, 27, and 28 above, and further in view of US 6,006,923 to Helmy. Cook, Wolff and Baltzer disclose all the limitations of the claim except every other ribs is not reinforced with wires and the non-reinforced ribs only extend partway between the upper and lower faces of the frame. Helmy discloses a similar screening arrangement including reinforcing some ribs with wires while not reinforcing others and the non-reinforced ribs only extend partway between the upper and lower faces of the frame (figure 2 and figure 4 and c2 lines 17+) as doing so allows for smaller screening openings while maintaining the desired rigidity (c2 lines 20+).

5. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Cook, Wolff and Baltzer to include, the every other nonreinforced shorter ribs, as taught by Helmy, to allow for smaller screening openings while maintaining the desired rigidity.

Allowable Subject Matter

6. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to anticipate or render obvious the securing of the wires to the upper and lower faces of the perimeter reinforcement when taken in combination with the other elements of claim 15.

Response to Arguments

8. Applicant's arguments filed 2-18-2010 have been fully considered but they are not persuasive. Applicant made statements regarding the method of the manufacture and materials thereof of the various references in arguing that the proposed combination would not have been obvious to one of ordinary skill in the art. Examiner contends that the structures are known for the purposes and advantages discussed in detail above and that the combination would have been obvious to one of ordinary skill in the art. Examiner also notes that most if not all of the references utilize a combination of both plastic and metal components and thus arguments relating to specific types of manufacturing facilities do not differentiate the claims from the prior art. Examiner is not convinced that the combination would not have been obvious and finds nothing in the applicant's remarks as to how the combination fails meet the claim limitations.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on (571) -272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3653

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/John Q. Nguyen/
Supervisory Patent Examiner, Art Unit 3654

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